BC

BRUHAT BANGALORE MAHANAGARA PALIKE
BYATARAYANPURA DIVISION

Name of Work: Package 3, includes 3 works of 100.00 Lakhs

1. Improvements to Road and Drains at Ashwath nagar cross roads in Ward No.06 (Thanisandra), Byatarayanapura Sub Division.

DETAILED-MEASUREMENT

FIRST & PART BILL

TEJUS CONSULTANTS
CONSULTING ENGINEERS AND DESIGNERS
No.58 MIG, 6th Cross, 3rd Main
1st Stage, Basaveshwaranagar
Bangalore-560079
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Bruhat Bengaluru Mahanagara Palike

Bytarayanapura Division

o :1st & Part Bill

e of Agency :- Benaka Developers & Project Pvt.Ltd.

e of Work :- Improvements to Road and Drains at Ashwath nagar cross roads in Ward No.06(Thanisandra), Byatarayanapura Division

Q / n	Description / Chainage		Side	Nos	L	B1	B2	Avg width	Depth	Quantity	Remarks / Unit	Rate	Amount
	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)												
asurements recorded on													
	Qty vide Pre measurement sheet page no . 142												
								Total Quantity		116.55	Cum	201.59	23,495.00
6	Removing and refixing stone slabs of drains and pointing in CM (1:3) (P.No.25, I.No.5.33 of PW, P&IWTD SR 2016-17)												
	Ashwathnagar cross road												
	LHS												
	0.00	3.00	L/S	1	3.00			2.00		6.00	BS slab		
	3.00	5.00	L/S	0	2.00			0.90		0.00	Deck slab		
	5.00	8.50	L/S	1	3.50			0.90		3.15	BS slab		
	8.50	17.50	L/S	0	9.00			0.90		0.00	Deck slab		
	17.50	28.00	L/S	1	10.50			0.90		9.45	BS slab		
	28.00	36.00	L/S	1	8.00			0.90		7.20	BS slab		
	36.00	38.40	L/S	0	2.40			0.90		0.00	Missing		
	38.40	56.00	L/S	1	17.60			0.90		15.84	BS slab		
	56.00	64.50	L/S	0	8.50			0.90		0.00	Missing		
	64.50	79.50	L/S	1	15.00			0.90		13.50	BS slab		
	79.50	94.50	L/S	1	15.00			0.90		13.50	BS slab		
	94.50	106.00	L/S	1	11.50			0.90		10.35	BS slab		
	106.00	108.50	L/S	0	2.50			0.90		0.00	Missing		
	Hunase marada Appayanna 4th cross Chikkanna Badavane												
	LHS												
	0.00	13.50	L/S	1	13.50			0.90		12.15	BS Slab		
	13.50	16.50	L/S	1	3.00			0.90		2.70	BS Slab		
	16.50	22.00	L/S	0	0.00			0.90		0.00	Open drain		
	22.00	28.50	L/S	1	6.50			0.90		5.85	BS Slab		
	28.50	40.00	L/S	0	0.00			0.90		0.00	Deck slab		
	40.00	50.00	L/S	1	10.00			0.90		9.00	BS Slab		
	50.00	60.00	L/S	1	10.00			0.90		9.00	BS Slab		
	60.00	70.00	L/S	1	10.00			0.90		9.00	BS Slab		
	70.00	89.00	L/S	1	19.00			0.90		17.10	BS Slab		
	89.00	92.00	L/S	0	0.00			0.90		0.00	Open drain		
	92.00	101.00	L/S	0	0.00			0.90		0.00	RCC Slab		
	101.00	104.50	L/S	0	0.00			0.90		0.00	Open drain		
	104.50	110.00	L/S	1	5.50			0.90		4.95	BS Slab		
	110.00	120.00	L/S	1	10.00			0.90		9.00	BS Slab		
	120.00	135.00	L/S	1	15.00			0.90		13.50	BS Slab		
	135.00	150.00	L/S	1	15.00			0.90		13.50	BS Slab		
	150.00	165.00	L/S	1	15.00			0.90		13.50	BS Slab		
	165.00	180.00	L/S	1	15.00			0.90		13.50	BS Slab		
	180.00	195.00	L/S	1	15.00			0.90		13.50	BS Slab		
	195.00	210.00	L/S	1	15.00			0.90		13.50	BS Slab		

Tejus Consultants

Contractor

Assistant Engineer

Assistant Executive Engineer

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of Work :- Improvements to Road and Drains at Ashwath nagar cross roads in Ward No.06(Thanisandra), Byatarayanapura ion

Description Chainage		Side	Nos	L	B1	B2	Avg width	Depth	Quantity	Remarks / Unit	Rate	Amount
210.00	225.00	L/S	1	15.00			0.90		13.50	BS Slab		
225.00	240.00	L/S	1	15.00			0.90		13.50	BS Slab		
240.00	258.50	L/S	1	18.50			0.90		16.65	BS Slab		
258.50	280.00	L/S	0	0.00			0.90	43.65	0.00	Open drain		
							Total Quantity		282.39	Sqm	86.88	24,534.00

KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)

surements recorded on

Qty vide Pre measurement sheet page no . 263

								Total Quantity	579.87	Cum	160.44	93,035.00

5 KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)

surements recorded on

Qty vide Pre measurement sheet page no . 485

								Total Quantity	483.23	Cum	1906.87	9,21,453.00

6 KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)

surements recorded on

Qty vide Pre measurement sheet page no . 586

								Total Quantity	1932.91	Sq-m	32.01	61,873.00

7 KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17)

asurements recorded on

Qty vide Pre measurement sheet page no . 667

								Total Quantity	325.62	Sq-m	3.43	1,117.00

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ne of Work :- Improvements to Road and Drains at Ashwath nagar cross roads in Ward No.06(Thar ayanapura

Item	Description / Chainage	Side	Nos	L	B1	B2	Avg width	Depth	Quantity	Remarks / Unit	Rate	Amount
18	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)											
	easurements recorded on											
	Qty vide Pre measurement sheet page no ,											
								Total Quantity	2258.53	Sq-m	13.72	30,987.00
19	KSRRB M500-19, Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications, MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)											
	Ashwathnagar Cross road (Flag Pole)											
	0.00	20.00		1	20.00	5.00	6.10	5.55	0.04	4.44		
	20.00	30.00		1	10.00	6.10	5.90	6.00	0.04	2.40		
	30.00	60.00		1	30.00	5.90	6.50	6.20	0.04	7.44		
	60.00	90.00		1	30.00	6.50	5.60	6.05	0.04	7.26		
	90.00	109.00		1	19.00	5.60	6.20	5.90	0.04	4.48		
	Sri Matha Kutira House Road											
	0.00	19.00		1	19.00	5.00	5.30	5.15	0.04	3.91		
	19.00	31.00		1	12.00	5.00	5.20	5.10	0.04	2.45		
	Hunase marada Appayanna 4th cross Chikkanna Badavane											
	0.00	1.50		1	1.50	3.80	4.90	4.35	0.04	0.26		
	1.50	15.00		1	13.50	4.90	4.70	4.80	0.04	2.59		
	15.00	30.00		1	15.00	4.70	4.50	4.60	0.04	2.76		
	30.00	45.00		1	15.00	4.50	5.00	4.75	0.04	2.85		
	45.00	60.00		1	15.00	5.00	4.80	4.90	0.04	2.94		
	60.00	75.00		1	15.00	4.80	5.50	5.15	0.04	3.09		
	75.00	90.00		1	15.00	5.50	5.10	5.30	0.04	3.18		
	90.00	105.00		1	15.00	5.10	5.80	5.45	0.04	3.27		
	105.00	120.00		1	15.00	5.80	5.80	5.80	0.04	3.48		
	120.00	135.00		1	15.00	5.80	5.50	5.65	0.04	3.39		
	135.00	150.00		1	15.00	5.50	5.10	5.30	0.04	3.18		
	150.00	156.00		1	6.00	5.10	4.00	4.55	0.04	1.09		
	156.00	165.00		1	9.00	4.00	4.10	4.05	0.04	1.46		
	165.00	169.00		1	4.00	4.10	4.90	4.50	0.04	0.72		
	169.00	176.00		1	7.00	4.90	4.00	4.45	0.04	1.25		
	176.00	187.00		1	11.00	4.00	4.90	4.45	0.04	1.96		
	187.00	205.00		1	18.00	4.90	5.10	5.00	0.04	3.60		
	205.00	225.00		1	20.00	5.10	4.90	5.00	0.04	4.00		
	225.00	240.00		1	15.00	4.90	5.60	5.25	0.04	3.15		
	240.00	255.00		1	15.00	5.60	6.60	6.10	0.04	3.66		
	255.00	270.00		1	15.00	6.60	5.55	6.08	0.04	3.65		
	270.00	280.50		1	10.50	5.55	6.40	5.98	0.04	2.51		

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Name of Work :- Improvements to Road and Drains at Ashwath nagar cross roads in Ward No.06(Thanisandra), Byatarayanapura Division

SOQ Item	Description / Chainage	Side	Nos	L	B1	B2	Avg width	Depth	Quantity	Remarks / Unit		
	Manhole Deductions											
	MH-1 (3.14*0.9*0.9)/4		-1				0.64	0.04	-0.03			
	MH-2 (3.14*0.9*0.9)/4		-1				0.64	0.04	-0.03			
	MH-3		-1				0.64	0.04	-0.03			
								Total Quantity	**90.34**	**Cum**	8642.67	**7,80,789.00**
20	KSRRB M800-13, Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803,(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)											
	Ashwathnagar Cross road (Flag Pole)											
	Edge Line		2	109.00			0.10		21.80			
	Sri Matha Kutira House Road											
	Edge Line		2	31.00			0.10		6.20			
	Hunase marada Appayanna 4th cross Chikkanna Badavane											
	Edge Line		2	280.50			0.10		56.10			
								Total Quantity	**84.10**	**Sqm**	585.32	**49,225.00**
											Total	**19,86,508.00**

19,86,512.00

Tejus Consultants

Contractor

Assistant Engineer

Assistant Executive Engineer

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Bruhat Bengaluru Mahanagara Palike

Bytarayanapura Division

No :1st & Part Bill

e of Agency :- Benaka Developers & Project Pvt.Ltd.

e of Work :- Improvements to Road and Drains at Fathima Layout cross roads in Ward No.06(Thanisandra),

arayanapura Sub Division

Q m	Description Chainage	Side	Nos	L	B1	B2	Avg width	Depth	Quantity	Remarks Unit	Rate	Amount
5	KSRRB 300-1. Earthwork excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17											
asurements recorded on	Qty vide Pre measurement sheet page no . 162											
								Total Quantity	214.00	Cum	201.59	43,140.00
8	KSRB 4-1.7 : Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.84cum and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2 Page No.13 It No.4.7											
easurements recorded on	Qty vide Pre measurement sheet page no . 364											
								Total Quantity	74.25	Cum	5768.64	4,28,309.00
9	KSRB 4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specificaitons. Specification No. KBS 4.6.2 (P.No.15 /I.No. 4.28 of CSR 2016-17)											
easurements recorded on 465	Qty vide Pre measurement sheet page no .											
								Total Quantity	44.50	Sq-m	264.08	11,752.00
10	KSRB 4-6.4 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth cills and string courses cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (P.No.15 /I.No. 4.31 of CSR 2016-17)											
easurements recorded on 566	Qty vide Pre measurement sheet page no .											
								Total Quantity	534.00	Sq-m	334.96	1,78,869.00
11	Providing and laying cement concrete using 20mm and downsize granite coarse aggregates and fine aggregates of ready mixed concrete (RMC) for RCC works laid in 15cms thick layers and well compacted vibrating, curing, finishing with necessary cement mortar, with all lead and lifts etc., complete (exclusive of cpost of steel and fabricaton charges) Ready Mixed Cement Concrete M 20 for Raft foundation, Column, Footing, main and secondary beams. (P.No.18, I.No.4.48 of PW, P&IWTD SR 2016-											
easurements recorded on 608	Qty vide Pre measurement sheet page no .											
								Total Quantity	44.55	Cum	6720.93	2,99,411.00

Tejus Consultants

Contractor

Assistant Engineer

Assistant Executive Engineer

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of Work :- Improvements to Road and Drains at Fathima Layout cross roads in Ward No.06(Thanisandra), yanapura Sub Division

	Description / Chainage	Side	Nos	L	B1	B2	Avg width	Depth	Quantity	Remarks / Unit	Rate	Amount
	KSRRB - M2300-14: Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, palcing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining memebrs wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications.Specification for TMT bars Fe 500(Page No-229. INo.28.8.2 2018-19)											
surements recorded on												
	Qty vide Pre measurement sheet page no . 9											
							Total Quantity		1.98	Tonne	79475.96	1,57,661.00
3	Providing and fixing RCC Precast cover slab of 250mm thick for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)											
	New slab											
	Culvert Desilt(2nd phase Balajikrupa Layout)		1	6.00			1.50		9.00			
	SSM Culvert (2nd		1	5.40			1.80		9.72			
							Total Quantity		18.72	Sqm	5734.38	1,07,348.00
21	KSRB 5.2-3 : Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6, stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13 .(P.No.23, I.No.5.6 of PW,P&IWTD SR 2016-17)											
easurements recorded on												
	Qty vide Pre measurement sheet page no . 10											
							Total Quantity		2.92	Cum	4786.62	13,958.00
23	KSRB 4-1.6 ; Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No. 4.6 of PWD SR 2016-17)											
asurements recorded on 10												
	Qty vide Pre measurement sheet page no .											740 2
							Total Quantity		1.19	Cum	6220.21	7,390.00
25	Providing and fixing RCC Precast cover slab of 100mm thick for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)											
	For New Drain											
	Opposite to Fathima Layout Main road											
	LHS											
	0.00	15.00		1	15.00			0.90		13.50		
	15.00	23.00		1	8.00			0.90		7.20		
	23.00	38.00		1	15.00			0.90		13.50		
											34.20	

Tejus Consultants

Contractor

Assistant Engineer

Assistant Executive Engineer

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: of Work :- Improvements to Road and Drains at Fathima Layout cross roads in Ward No.06(Thanisandra), vanapura Sub Division

Q n	Description / Chainage		Side	Nos	L	B1	B2	Avg width	Depth	Quantity	Remarks / Unit	Rate	Amount
	RHS												
	0.00	15.00		1	15.00			0.90		13.50			
	15.00	30.00		1	15.00			0.90		13.50			
	Fathima Layout LHS												
	0.00	15.00		1	15.00			0.90		13.50			
	15.00	24.00		1	9.00			0.90		8.10			
	24.00	28.00		0	0.00			0.90		0.00			
	28.00	46.00		1	18.00			0.90		16.20			
	46.00	50.00		0	0.00			0.90		0.00			
	50.00	65.00		1	15.00			0.90		13.50			
	65.00	69.00		1	4.00			0.90		3.60			
	69.00	73.00		0	0.00			0.90		0.00			
	73.00	88.00		1	15.00			0.90		13.50			
	88.00	91.00		1	3.00			0.90		2.70			
	91.00	96.00		0	0.00			0.90		0.00			
	96.00	111.00		1	15.00			0.90		13.50			
	111.00	118.50		1	7.50			0.90		6.75			
	118.50	126.00		0	0.00			0.90		0.00			
	126.00	141.00		1	15.00			0.90		13.50			
	141.00	157.00		1	16.00			0.90		14.40			
	Masjid E-Fathima Layout road												
	0.00	15.00		1	15.00			0.90		13.50			
	15.00	22.00		1	7.00			0.90		6.30		166.05	
									Total Quantity	**200.25**	**Sqm**	**1959.63**	**3,92,416.00**
27	Cement concrete pavement.Construction of un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base with OPC cement or any other type as per clause 1051.2.2 design mix M20/M30 , with 25mm and down size graded granite metal coarse aggregates and fine aggregtes , with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 , mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints including groove cutting charges, joint filler, separation membrane, selant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per specifications. M30 (at 360Kg per cum coarse aggregate @ 0.69cum and fine aggregate @ 0.46cum) ((P.No.177, I.No.22.6.1 of PW,P&IWTD SR 2016-17)												
	Concrete Pavement												
	Asadullah khan house road												
	0.00	5.00		1	5.00	3.10	2.30	2.70	0.125	1.69			
	5.00	7.00		1	2.00	2.30	3.30	2.80	0.125	0.70			
	7.00	10.00		1	3.00	2.20	3.00	2.60	0.125	0.98			
	10.00	15.00		1	5.00	2.30	3.00	2.65	0.125	1.66		5.02	

Tejus Consultants

Contractor

Assistant Engineer

Assistant Executive Engineer

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ne of Work :- Improvements to Road and Drains at Fathima Layout cross roads in Ward No.06(Thanisandra).
anapura Sub Division

QQ em	Description Chainage		Side	Nos	L	B1	B2	Avg width	Depth	Quantity	Remarks Unit	Rat	
	15.00	20.00		1	5.00	2.80	2.50	2.65	0.125	1.66			
	20.00	25.00		1	5.00	2.50	2.20	2.35	0.125	1.47			
	25.00	30.00		1	5.00	2.20	2.60	2.40	0.125	1.50			
	MS Nandini Milk Road LHS												
	0.00	10.00		1	10.00	3.20	3.30	3.25	0.125	4.06			
	10.00	20.00		1	10.00	3.30	3.00	3.15	0.125	3.94			
	20.00	30.00		1	10.00	3.00	2.80	2.90	0.125	3.63			
	30.00	36.00		1	6.00	2.80	3.00	2.90	0.125	2.18			
	MS Nandini Milk Opposite Road												
	0.00	4.00		1	4.00	2.40	2.00	2.20	0.125	1.10			
	4.00	12.00		1	8.00	2.00	1.70	1.85	0.125	1.85			
	12.00	20.00		1	8.00	1.70	1.70	1.70	0.125	1.70			
	20.00	30.00		1	10.00	1.70	1.60	1.65	0.125	2.06			
	30.00	36.00		1	6.00	1.60	1.70	1.65	0.125	1.24			
	Masjid Opp.road												
	0.00	5.00		1	5.00	2.90	2.80	2.85	0.125	1.78			
	5.00	10.00		1	5.00	2.80	2.10	2.45	0.125	1.53			
	10.00	19.30		1	9.30	2.10	3.20	2.65	0.125	3.08			
	19.30	26.90		1	7.60	3.20	3.00	3.10	0.125	2.95			
	26.90	33.90		1	7.00	3.00	3.60	3.30	0.125	2.89			
	33.90	42.50		1	8.60	3.60	3.50	3.55	0.125	3.82		42.42	318136.08
								Total Quantity		47.44	Cum	6706.07	3,18,107.00
28	Vaccum de-watering with vaccum pump and suction mat and compaction with skin floater clubbed with floating disc including cost of generator, HOM of machinery, Screed Vibratory, Power Floater, blade and disc etc., with all lead and lift.(P.No.177, I.No.22.7 of PW, P&IWTD SR 2016-17)												
easurements recorded on													
	Qty vide Pre measurement sheet page no .10 & 11												
								Total Quantity		374.59	Sq-m	102.89	38,541.00
												Total	19,96,902.00

19,96,963.00

Tejus Consultants

Contractor

Assistant Engineer

Assistant Executive Engineer

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BRUHAT BANGALORE MAHANAGARA PALIKE
BYATARAYANPURA DIVISION

Name of Work: Package 3, includes 3 works of 100.00 Lakhs

3. Improvements to Road and Drains at Saraipalya Vidyasagar cross roads in Ward No.06 (Thanisandra), Byatarayanapura Sub Division.

DETAILED-MEASUREMENT

FIRST & PART BILL

TEJUS CONSULTANTS
CONSULTING ENGINEERS AND DESIGNERS
No.58 MIG, 6th Cross, 3rd Main
1st Stage, Basaveshwaranagar
Bangalore-560079
☎ 080 - 23287532
email: tejusconsultants@gmail.com

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Bruhat Bengaluru Mahanagara Palike

Bytarayanapura Division

:1st & Part Bill

of Agency :- Benaka Developers & Project Pvt.Ltd.

of Work :- Improvements to Road and Drains at Saraipalya Vidyasagar cross roads in Ward No.06(Thanisandra),
rayanapura Sub Division

Description / Chainage	Side	Nos	L	B1	B2	Avg width	Depth	Quantity	Remarks / Unit	Rate	Amount
KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)											
surements recorded on											
Qty vide Pre measurement sheet page no . 1 & 2											
							Total Quantity	**172.23**	**Cum**	**201.59**	**34,720.00**
Removing and refixing stone slabs of drains and pointing in CM (1:3) (P.No.25, I.No.5.33 of PW, P&IWTD SR 2016-17)											
Tuba layout											
RHS											
0.00	14.00	R/S	0	0.00			0.90	0.00	RCC Slab		
14.00	19.00	R/S	0	0.00			0.90	0.00	Cross road		
19.00	25.00	R/S	0	0.00			0.90	0.00	RCC Slab		
25.00	40.00	R/S	0	0.00			0.90	0.00	RCC Slab		
40.00	48.50	R/S	1	8.50			0.90	7.65	BS slab		
48.50	55.00	R/S	1	6.50			0.90	5.85	BS slab		
55.00	69.00	R/S	0	0.00			0.90	0.00	Open drain		
69.00	80.00	R/S	0	11.00			0.90	0.00	RCC Slab		
80.00	86.00	R/S	1	6.00			0.90	5.40	BS slab		
86.00	94.30	R/S	0	8.30			0.90	0.00	RCC Slab		
Cross road (Masjidi Road)											
RHS											
0.00	5.00	R/S	1	5.00			0.90	4.50	RCC Slab		
5.00	19.00	R/S	0	0.00			0.90	0.00	Only desilt		
19.00	30.00	R/S	1	11.00			0.90	9.90	RCC Slab		
30.00	45.00	R/S	1	15.00			0.90	13.50	RCC Slab		
45.00	60.00	R/S	1	15.00			0.90	13.50	RCC Slab		
60.00	75.00	R/S	1	15.00			0.90	13.50	RCC Slab		
75.00	90.00	R/S	1	15.00			0.90	13.50	RCC Slab		
90.00	96.00	R/S	1	6.00			0.90	5.40	RCC Slab		
Vidyasagar 1st main road											
LHS											
0.00	15.00		1	15.00			0.90	13.50	RCC Slab		
15.00	34.00		1	19.00			0.90	17.10	RCC Slab		
							Total Quantity	**123.30**	**Sqm**	**86.88**	**10,712.00**

EFC 10/8/2024

Tejus Consultants

Contractor

Assistant Engineer

Assistant Executive Engineer

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Detailed Measurements

of Work :- Improvements to Road and Drains at Saraipalya Vidyasagar cross roads in Ward No.06(Thanisandra),
yanapura Sub Division

	Description / Chainage	Side	Nos	L	B1	B2	Avg width	Depth	Quantity	Remarks / Unit	Rate	Amount
	KSRB 4-1.7 : Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.84cum and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2 Page No.13 It No.4.7											
surements recorded on												
	Qty vide Pre measurement sheet page no . 2							Total Quantity	17.49	Cum	5768.64	1,00,894.00
9	KSRB 4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specificaitons. Specification No. KBS 4.6.2 (P.No.15 /I.No. 4.28 of CSR 2016-17)											
asurements recorded on												
	Qty vide Pre measurement sheet page no . 2 & 3							Total Quantity	31.80	Sq-m	264.08	8,398.00
10	KSRB 4-6.4 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth cills and string courses cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (P.No.15 /I.No. 4.31 of CSR 2016-17)											
easurements recorded on												
	Qty vide Pre measurement sheet page no . 3							Total Quantity	254.40	Sq-m	334.96	85,214.00
11	Providing and laying cement concrete using 20mm and downsize granite coarse aggregates and fine aggregates of ready mixed concrete (RMC) for RCC works laid in 15cms thick layers and well compacted vibrating, curing, finishing with necessary cement mortar, with all lead and lifts etc., complete (exclusive of cpost of steel and fabricaton charges) Ready Mixed Cement Concrete M 20 for Raft foundation, Column, Footing, main and secondary beams. (P.No.18, I.No.4.48 of PW, P&IWTD											
easurements recorded on												
	Qty vide Pre measurement sheet page no . 3 & 4							Total Quantity	33.39	Cum	6720.93	2,24,412.00
12	KSRRB - M2300-14: Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, palcing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining memebrs wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications.Specification for TMT bars Fe 500(Page No-229. INo.28.8.2 2018-19)											
Measurements recorded on 4												
	Qty vide Pre measurement sheet page no .							Total Quantity	1.62	Tonne	79475.96	128751.00 / 1,28,856.00

Tejus Consultants

Contractor

Assistant Engineer 30.11.2021

ಸಹಾಯಕ Assistant Executive Engineer

f Work :- Improvements to Road and Drains at Saraipalya Vidyasagar cross roads in Ward No.06(Thanisandra), yanapura Sub Division

	Description / Chainage	Side	Nos	L	B1	B2	Avg width	Depth	Quantity	Remarks / Unit	Rate	Amount
	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)											
urements recorded on 5												
	Qty vide Pre measurement sheet page no .							Total Quantity	342.22	Cum	160.44	54,905.00
5	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)											
asurements recorded on												543801.00
	Qty vide Pre measurement sheet page no . 566							Total Quantity	285.18	Cum	1906.87	5,43,804.00
16	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)											
easurements recorded on												
	Qty vide Pre measurement sheet page no . 6							Total Quantity	1140.73	Sq-m	32.01	36,515.00
18	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)											
Measurements recorded on												
	Qty vide Pre measurement sheet page no .							Total Quantity	1140.73	Sq-m	13.72	15,651.00

Tejus Consultants

Contractor

Assistant Engineer

Assistant Executive Engineer

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Work :- Improvements to Road and Drains at Saraipalya Vidyasagar cross roads in Ward No.(

anapura Sub Division

Description / Chainage		Side	Nos	L	B1	B2	Avg width	Depth	Quantity	Remarks / Unit		ount
KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)												
Vidhya sagar												
Tuba layout												
0.00	15.00		1	15.00	6.60	6.50	6.55	0.04	3.93			
15.00	30.00		1	15.00	6.50	6.60	6.55	0.04	3.93			
30.00	45.00		1	15.00	6.60	6.10	6.35	0.04	3.81			
45.00	60.00		1	15.00	6.10	7.60	6.85	0.04	4.11			
60.00	75.00		1	15.00	7.60	6.70	7.15	0.04	4.29			
75.00	90.00		1	15.00	6.70	5.30	6.00	0.04	3.60			
90.00	108.50		1	18.50	5.30	5.40	5.35	0.04	3.96			
Cross road (Masjidi Road)												
0.00	15.00		1	15.00	5.10	5.30	5.20	0.04	3.12			
15.00	30.00		1	15.00	5.30	5.20	5.25	0.04	3.15			
30.00	45.00		1	15.00	5.20	4.60	4.90	0.04	2.94			
45.00	60.00		1	15.00	4.60	4.70	4.65	0.04	2.79			
60.00	75.00		1	15.00	4.70	4.70	4.70	0.04	2.82			
75.00	86.00		1	11.00	4.70	3.70	4.20	0.04	1.85			
86.00	90.00		1	4.00	3.70	3.70	3.70	0.04	0.59			
90.00	95.00		1	5.00	3.70	3.70	3.70	0.04	0.74			
							Total Quantity		**45.63**	**Cum**	8642.67	3,94,356.00
20	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)											
Vidhya sagar												
Tuba layout												
Edge Line			2	108.50				0.10	21.70			
Cross road (Masjidi Road)												
Edge Line			2	90.00				0.10	18.00			
							Total Quantity		**39.70**	**Sqm**	585.32	**23,237.00**
											Total	**16,61,674.00**

Tejus Consultants

Contractor

Assistant Engineer

Assistant Executive Engineer

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